

# HOLIDAY HOME WORK

## CLASS-X

SUB-HIST/DP/ECO

Q1. Picture based questions.

- (a) Page-3 Fig 1 Describe the picture.
- (b) Page-5 fig-2 Describe the picture.
- (c) Page -7 fig -5 Describe the picture.
- (d) Page -11 fig-6 Describe the picture.
- (e) Page-23 fig-17 Describe the picture.
- (f) Page -25 fig-19 Describe the picture.

Q2. Name the French artist who prepared a series of four prints visualizing his dream of new world.

Q3. Name the painting prepared by Frederic Sorrieu 1848.

Q4. What is conservatism?

Q5. When was France declared as a Republic?

Q6. When did Napoleon invade Italy?

Q7. In which year the treaty of Vienna was signed?

Q8. Who was Johann Gottfried Herder?

Q9. Who was called Bismarck of Italy?

Q10. In which year unification of Germany was achieved?

Q11. What did the German Sword stand for?

Q12. Which territories did the Habsburg empire rule over?

Q13. Who played the key role in unifying Germany?

## **SUB- GEOGRAPHY**

1. Differentiate between stock and reserve. (3)
2. What is sustainable development? Suggest measures to use abandon mines. (3)
3. What was agenda 21? What focus was given for agenda 21? (3)
4. Why is resource planning is essential in India? (3)
5. What is land use pattern? (1)
6. What solutions can be adopted to eradicate problems of land degradation? (3)
7. Which soil is known for self ploughing capacity? Write two crops grown in this soil. (3)
8. What is ravine? Suggest measures to make useful of the ravine. (3)

## **English**

- 1) Question + Answer of all the Chapters taught.
- 2) Solve any five unseen passages.
- 3) Poem writing on the following topics.
  - \* Fast Food
  - \* Zoo
- 4) Essay/ Article writing on the following topics. (100 words)
  - \* Failure
  - \* War and Peace.

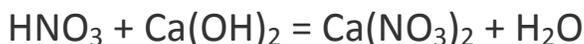
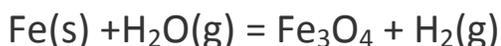
## **SUB: CHEMISTRY**

- Q1.** What happens chemically when quick lime is added to water?
- Q2.** How will you test for the gas which is liberated when HCL reacts with an active metal?
- Q3.** What is an oxidation reaction? Is it exothermic or endothermic? Give one example of oxidation Reaction.
- Q4.** Give an example of photochemical reaction.

**Q5.** Give an example of a decomposition reaction. Describe any activity to illustrate such a reaction by heating.

**Q6.** Why is respiration considered as exothermic process?

**Q7.** Balance the following chemical equation.



**Q8.** On what basis is a chemical equation balanced?

**Q9.** State any two observations in an activity suggesting the occurrence of a chemical reaction.

**Q10.** Name a reducing agent which may be used to obtain manganese from manganese dioxide.

**Q11.** What change in colour is observed when silver chloride is left exposed to sunlight? Also mention the type of chemical reaction.

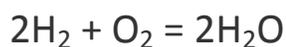
**Q12.** Define a combination reaction. Give one example of an exothermic combination reaction.

**Q13.** What is observed when a solution of potassium iodide is added to lead nitrate solution? What type of reaction is this? Write a balanced chemical equation for this reaction.

**Q14.** Distinguish between an exothermic and an endothermic reaction.

**Q15.** Distinguish between a displacement and a double displacement reaction.

**Q16.** Identify the type of reaction in the following:



### EXTRA

1. What is a redox reaction?

2. What is corrosion? Explain its advantage and disadvantage.

3. What is rancidity? How can we reduce the problem of rancidity?

4. How is corrosion different from rusting?

5. What is meant by endothermic and exothermic reactions? Give suitable example for each.

6. Define different types of chemical reaction and give examples for each.

7. Why is photosynthesis considered as an endothermic reaction?

8. In electrolysis of water, why is the volume of gas collected over one electrode double that of the other electrode?
9. What happens when water is added to solid calcium oxide taken in a container? Write a chemical formula for the same.
10. Give one use of quick lime.
11. Give three types of decomposition reaction.
12. Name the compound used for testing  $\text{CO}_2$  gas.

## ACID, BASE AND SALTS

1. How will you test for a gas which is liberated when HCL reacts with an active metal?
2. What is baking powder? How does it make the cake soft and spongy?
3. When fresh milk is changed into curd will its pH value increase or decrease? Why?
4. Give Arrhenius definition of an acid and a base.
5. What happens chemically when quick lime is added to water? Name the gas evolved when dilute HCL reacts with Sodium hydrogen carbonate. How is it recognized?
7. How does the flow of acid rain water into a river make the survival of aquatic life in the river difficult?
8. How is the pH of a solution of an acid influenced when it is diluted?
9. How does the pH of the solution change when a solution of base is diluted?
10. Arrange these in increasing order of their pH values- NaOH, blood, lemon juice.
11. Two solutions of A and B have pH values of 5 and 8. Which solution will be basic in nature?
12. Why does tooth decay start when pH of mouth is lower than 5.5?
13. What would be the colour of litmus in a solution of sodium carbonate?
14. Name the products obtained when sodium hydrogen carbonate is heated. Write the chemical equation for the same.
15. Write the chemical formula of washing soda and baking soda. Which one of these two is an ingredient of antacids? How does it provide relief in stomachache?
16. What do you mean by water of crystallization? of a substance? Describe an activity to show that blue copper sulphate crystals contain water of crystallization.
17. How can washing soda be obtained from baking soda? Name an industrial use of washing soda other than washing clothes.
18. Why does 1 M HCL solutions have a higher concentration of  $\text{H}^+$  ions than 1M  $\text{CH}_3\text{COOH}$  solution?

## EXTRA

1. Why is Plaster of Paris stored in a moisture proof container?
2. What do you mean by neutralization reaction? Give two examples.
3. Mention two uses of baking soda and washing soda.
4. Why does a milkman add a small amount of baking soda to fresh milk to shift the pH of fresh milk from 6 to slightly alkaline?
5. Why do acids not show acidic behavior in the absence of water?
6. Rain water conducts electricity but distilled water does not. Why?
7. Why don't we keep sour substances in brass and copper vessels?
8. What is the common name of  $\text{CaOCl}_2$ ?
9. Name the compound used for softening hard water.
10. What happens when baking soda is heated?
11. Give the properties and uses of bleaching powder.
12. Give a few uses of acids, bases and salts respectively.

## PHYSICS

### CHAPTER -01

#### *ELECTRICITY*

1. What do you mean by quark? Does it violate any property of electric charge? [2 mark]
2. Define electric potential difference. [1 mark]
3. Calculate the potential difference between 2 terminals of a battery, if 100J work is required to transfer 20C from one terminal to another. [1 mark]
4. What is the cause of resistance? [3 mark]
5. How many electrons pass through a conductor in 0.2 seconds if the current passing through it is 0.5 ampere? [2 mark]
6. State Ohm's Law with suitable diagram. [2 mark]
7. If the length of wire is increased by 10% keeping volume constant then by what % does its resistance increase? [2 mark]
8. If a copper wire is cut into 5 equal parts then find the ratio of resistance of those pieces in series to parallel. [2 mark]

9. 3 identical resistors of resistance  $6\ \text{ohm}$  each are arranged to get an equivalent resistance of  $4\ \text{ohm}$  and  $9\ \text{ohm}$ . Show its arrangement. [2 mark]
10. An electric heater of  $R=500\ \text{ohm}$  is connected to a main supply for 30 minutes. If  $5\text{A}$  current flows through the filament of the bulb then calculate the heat energy. [2 mark]
11. A household use the following appliances:
- Fridge of  $400\text{W}$  for 10 hrs each day
  - 2 electric fans of  $80\text{W}$  each for 12 hrs each day
  - 6 bulbs of  $18\text{W}$  each for 6 hrs a day. Calculate the electric bill for month of June, if 1 unit costs 3 rupees. [5 mark]
12. Define electric power and its unit. [1 mark]
13. Define commercial unit of electric energy and express it in joules. [2 mark]
14. A silver wire has diameter of  $0.4\ \text{mm}$  and resistivity of  $1.6 \times 10^{-8}$ . How much length of this wire is required to make a  $1\ \text{ohm}$  coil? [2 mark]
15.  $10^{20}$  electrons each having charge of  $1.6 \times 10^{-19}\ \text{C}$  move from point A to B in 0.1 seconds. Calculate the current and give its direction. [2 mark]

## CHAPTER -02

### **MAGNETIC EFFECTS OF ELECTRIC CURRENT**

- Distinguish between natural and artificial magnets? [2 mark]
- Write a brief note on magnetic field and field lines. [2 mark]
- Write 4 properties of magnetic field lines. [2 mark]
- Write a short note on magnetic inclination or dip. [2 mark]
- With a suitable diagram explain Oersted's experiment. [3 mark]
- Define Ampeare's Swimming Rule. [1 mark]
- State Right Hand Thumb Rule. For what purpose is it used? [2 mark]

## BIOLOGY

- Q1. Discuss the role of various digestive enzymes in human body.
- Q2. What causes movement of food inside the alimentary canal?
- Q3. "Respiration is vital function of the body." Justify this statement.
- Q4. Why is it dangerous to inhale air containing carbon dioxide?
- Q5. Why do plants need Nitrogen? How do plants obtain Nitrogen?
- Q6. State five functions of blood in our body.
- Q7. Why do some people need a dialysis machine? What does the machine do?
- Q8. State the difference between artery, veins and capillary.
- Q9. Why does the heart need valves?
- Q10. What is the role of glomerulus in the kidney?

## MATHEMATICS

### CHAPTER: 1 (Real Numbers)

1.	Prove that $7 + 3\sqrt{2}$ is not a rational number.
2.	Prove that $\sqrt{2}$ is an irrational number.
3.	Show that any positive odd integer is of the form $4q + 1$ or $4q + 3$ where $q$ is a positive integer.
4.	Find H.C.F. of 65 and 117 and find a pair of integral values of $m$ and $n$ such that $\text{H.C.F.} = 65m + 117n$
5.	Show that any positive integer is of the form $3q$ or $3q + 1$ or $3q + 2$ for some integer $q$ .
6.	Two tanks contain 850 l and 680 l of milk respectively. Find the maximum capacity of a container which can measure the milk of either tank in exact number of times.
7.	Find the largest number which when divides 969 and 2059 leaves remainders 9 and 11 respectively.
8.	The length, breadth and height of a room are 8m 25cm, 6m 75cm and 4m 50cm respectively. Find the length of the longest rod that can measure the three dimensions of the room exactly.
9.	—

	Prove that $\sqrt{5}$ is an irrational number.
10.	Prove that $\sqrt{p}$ is an irrational number where $p$ is a prime number.
11.	Show that any positive odd integer is of the form $6q + 1$ or $6q + 3$ or $6q + 5$ for some integer $q$ .
12.	If $p$ and $q$ are primes, prove that $(\sqrt{p} + \sqrt{q})$ is also an irrational.
13.	Prove that the product of any three consecutive positive integers is divisible by 6. OR, prove that for any positive integer $n$ , $(n + 1)(n + 2)$ is always divisible by 6.
14.	Show that the square of an odd positive integer is of the form $8m + 1$ , where $m$ is some whole number.
15.	Prove that the square of any positive integer is of the form $5q$ or $5q + 1$ or $5q + 4$ for some integer $q$ .
16.	Show that one and only one out of $n$ , $n + 2$ and $n + 4$ , is divisible by 3 for any integer $n$ .
17.	Prove that the cube of any positive integer is of the form $4m$ or $4m + 1$ or $4m + 3$ for some integer $m$ .
18.	Show that one and only one out of $n$ , $n + 4$ , $n + 8$ , $n + 12$ and $n + 16$ , is divisible by 5 for any integer $n$ .
19.	Prove that the cube of any positive integer is of the form $9m$ or $9m + 1$ or $9m + 8$ for some integer $m$ .
20.	If $\sqrt{ab}$ is an irrational number, prove that $(\sqrt{a} + \sqrt{b})$ is an irrational number.

### CHAPTER: 2 (Polynomials)

1.	Find the zeroes of the quadratic polynomial $3x^2 - 2$ and verify the relationship between the zeroes and the coefficient
2.	On dividing $x^3 - 8x^2 + 20x - 10$ by a polynomial $g(x)$ the quotient and the remainder were $x - 4$ and 6 respectively. Find $g(x)$ .
3.	Divide the polynomial $x^4 - 9x^2 + 9$ by the polynomial $x^2 - 3x$ and verify the division algorithm.
4.	If one zero of the quadratic polynomial $f(x) = 4x^2 - 8kx + 8x - 9$ is negative of the other, then find the value of $k$ and also find the zeroes of $kx^2 + 3kx + 2$ .
5.	When a polynomial $6x^4 + 8x^3 + 29x^2 + 21x + 7$ is divided by another polynomial $3x^2 + 4x + 1$ , the remainder is in the form $ax + b$ . Find $a$ and $b$ .
6.	Obtain all other zeroes of the polynomial $x^4 + 4x^3 - 2x^2 - 20x - 15$ if two of its zeroes are $\sqrt{5}$ and $-\sqrt{5}$ .
7.	If $\alpha$ and $\beta$ are the zeroes of the polynomial $f(x) = x^2 - 6x + k$ , find the value of $k$ such that $\alpha^2 + \beta^2 = 40$ .
8.	If $\alpha$ and $\beta$ are the zeroes of the polynomial $f(x) = x^2 - (k - 6)x + 2(2k - 1)$ , find the value of $k$ such that $\alpha + \beta = \frac{1}{2} \alpha\beta$ .

9.	If zeroes of the polynomial $x^2 + px + q$ are double to the zeroes of the polynomial $2x^2 - 5x - 3$ , find the value of $p$ and $q$ .
10.	On dividing $x^4 - x^3 - 3x^2 + 3x + 2$ by a polynomial $(x)$ , the quotient and remainder are $x^2 - x - 2$ and $2x$ respectively. Find $(x)$ .
11.	Divide the polynomial $x^4 - 17x^2 + 34x - 12$ by $x - 2$ and find the quotient and remainder. Also verify the division algorithm.
12.	An NGO decided to distribute books and pencils to the students of a school running by some other NGO. For this they collected some amount from different people. The total amount collected is represented by $4x^4 + 2x^3 - 8x^2 + 3x - 7$ . From this fund each student received same amount. If the number of students is represented by $x - 2 + 2x^2$ and after distribution the amount left is represented by $5x - 11$ , then find the amount received by each students. What value has been depicted by the NGO?
13.	Obtain all other zeroes of the polynomial $x^4 - 17x^2 - 36x - 20$ , if two of its zeroes are $+5$ and $-2$ .
14.	If the polynomial $x^4 + 7x^3 + 7x^2 + px + q$ is exactly divisible by $x^2 + 7x + 12$ then find the value of $p$ and $q$ .
15.	On dividing the polynomial $f(x) = 4x^4 - 5x^3 - 39x^2 - 46x - 2$ by the polynomial $g(x)$ , the quotient is $x^2 - 3x - 5$ and the remainder is $-5x + 8$ . Find the polynomial $g(x)$ .
16.	Given polynomials $f(x) = x^3 + 5x^2 + 7x + 3$ and $g(x) = x^2 + 2x$ . (i) What should be subtracted from $(x)$ so that it will be exactly divisible by $(x)$ ? (ii) What should be added to $(x)$ so that it will be exactly divisible by $(x)$ ?
17.	If the zeroes of the polynomial $p(x) = 2x^3 - 15x^2 + 37x - 30$ are in AP, find them.
18.	If the squared difference of the zeroes of the quadratic polynomial $g(x) = x^2 + px + 45$ is equal to 144 then find the value of $p$ .
19.	If the polynomial $f(x) = 3x^4 + 3x^3 - 11x^2 - 5x + 10$ is completely divisible by $3x^2 - 5$ , find all of its zeroes.
20.	When the polynomial $f(x) = x^4 - 6x^3 + 16x^2 - 25x + 10$ is divided by $x^2 - 2x + k$ , the remainder comes out to be $x + k$ , find $k$ and $a$ .

### CHAPTER: 3 (A pair of Linear Equations in Two Variables)

1.	For what value of $p$ and $q$ will the following pair of linear equations has infinitely many solutions. $4x + 5y = 2$ ; $(2p + 7q)x + (p + 8q)y = 2q - p + 1$ .
2.	Solve the following pair of linear equations; $\frac{ax}{b} - \frac{by}{a} = a + b$ ; $ax - by = 2ab$ .
3.	If the system of equations $3x + y = 1$ and $(2k - 1)x + (k - 1)y = 2k + 1$ has no solution, find the value of $k$ .
4.	For what value of $p$ will the following pair of linear equations has no solutions.

	$(2p - 1)x + (p - 1)y = 2p + 1; \quad y = 1 - 3x.$
5.	The sum of the numerator and denominator of a fraction is 12. If 1 is added to both the numerator and denominator the fraction becomes $\frac{3}{4}$ . Find the fraction.
6.	Solve for $x$ and $y$ ; $2(3x - y) = 5xy; \quad 2(x + 3y) = 5xy.$
7.	Solve for $x$ and $y$ ; $\frac{a^2}{x} - \frac{b^2}{y} = 0; \quad \frac{a^2b}{x} + \frac{b^2a}{y} = a + b$
8.	In a $\Delta ABC$ , $\angle C = 3\angle B = 2(\angle A + \angle B)$ . Find the measure of three angles of $\Delta ABC$ .
9.	Find the four angles of a cyclic quadrilateral $ABCD$ in which $\angle A = (2x - 1)^\circ, \angle B = (y + 5)^\circ, \angle C = (2y + 15)^\circ$ and $\angle D = (4x - 7)^\circ$ .
10.	The larger of two supplementary angles exceeds the smaller angle by $18^\circ$ . Find the angles.
11.	In a two digit number, the digit in the unit place is twice of the digit in the tenth place. If the digits are reversed, the new number is 27 more than the given number. Find the number.
12.	Solve the following pair of linear equations graphically; $3x - y = 12$ and $x - 3y + 6 = 0$ . Hence shade the region bounded by these lines and $x$ -axis. Also find the area of the shaded region.
13.	8 men and 12 women can finish a piece of work in 10 days, while 6 men and 8 women can finish it in 14 days. Find the time taken by one man alone and one woman alone.
14.	A two digit number is equal to 7 times the sum of its digits. The number formed by reversing the digits is less than the original number by 18. Find the original number.
15.	The age of the father is twice of the ages of his two children. After 20 years, his age will be equal to the sum of the ages of his two children. Find the age of the father and the ages of both children if one is 4 years elder than other.
16.	Places A and B are 80 km apart from each other on a straight highway. A car starts from A and another from B at the same time. If they move in same direction they meet in 8 hours and if they move in opposite directions they meet in 1 hour 20 minutes. Find the speed of the cars.
17.	Solve the following pair of linear equations graphically; $x + 3y = 6$ and $2x - 3y = 12$ . Hence shade the region bounded by these lines and $y$ -axis. Also find the area of the shaded region.
18.	A man travels 600 km partly by train and partly by car. It takes 8 hours and 40 minutes if he travels 320 km by train and rest by car. It would take 30 minutes more if he travels 200 km by train and rest by car. Find the speed of the train and car separately.
19.	A boat covers 32 km upstream and 36 km downstream in 7 hours. Also it covers 40 km

	upstream and 48 km downstream in 9 hours. Find the speed of the boat in still water and that of stream.
20.	The population of a village is 5000. If in a year the numbers of males were to increase by 5% and that of females increase by 3%, the population would grow to 5202. Find the number of males and females in the village.

### CLASS-X HINDI

- 1) किसी मनपसंद विषय पर कविता कहानी या लेख लिखो।
- 2) सिर, कान, आँख से सम्बंधित मुहावरों को खोजकर वाक्य बनाओ ।
- 3) पाठ से अलग कबीर के दोहों को खोजकर अर्थ सहित लिखो )5 (।
- 4) प्रेमचंदजी के बारे में पढ़कर उनके लेखन के बारे में लिखो और उनकी किन्हीं दो कहानियों को पढ़कर उनसे प्राप्त शिक्षा के बारे में लिखो ।

### SANSKRIT (H.H.W)

1. संस्कृत वर्णमाला लिखत ।

2. शुचिपर्यावरणस्य आवश्यकता वर्णयित्वा दश वाक्यानि संस्कृतेन लिखत ।

3. वर्गीय प्रथम वर्णस्य तृतीये परिवर्तनम् , वर्गीय प्रथम वर्णस्य पञ्चमे परिवर्तनम्, स्थाने अनुस्वारः सन्धेः प्रत्येकस्य दश दश उदाहरणानि लिखत ।

4. दश अव्यय पदानि लिखित्वा वाक्ये प्रयोगं कुरुत ।

### (SUB-ODIA)

୧. ଓଡ଼ିଆସାହିତ୍ୟରଥିବାପାରଗାଟିକୃଷ୍ଣକାବୟନୋମରଖେତାକେବିଓକାବୟସମ୍ପଦକରଚିତ୍ରପଣୀରଖେ ।

୨. ବିରଷ୍ଟୟକାହାକୁକହନ୍ତି ? ଏହାରକରତ୍ପରକାଠେଓକଶକଶ ? ଉଦାହରଣଦିଅ ।

୩. ସମାସକାହାକୁକହାଯାଏ ? ଏହାପୂରକାରେଦେସହଉଦାହରଣଦିଅ ।

## Class 10: COMPUTER

1. Make a comparison chart of the features of a web portal, blog and a web-directory.
2. Make a comparison chart of different types of protocols used in computer communication (at least 3)
3. Smartphone is one of the most important means of communication today. But it has also become a nuisance for some. Write your opinion (110-130 words) on the same using the given hints (you are free to provide inputs of your own).

### Hints

Important means of communication – connects a person socially- keeps people updated- has become a virtual companion- many disadvantages- disrupts peace of mind- a constant source of disturbance- excessive usage leads to many health disorders- cause of deadly accidents on road- the biggest distraction for students should be used wisely- use to be minimized.